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SEQUENCE LISTING

<110> MAREN & GUARDO

<120> SOMATIC TRANSFER OF MODIFIED GENES TO PREDICT DRUG EFFECTS

<130> 47728(1699)

<140> 09/187,669

<141> 1998-11-05

<150> 60/064,893

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<160> 2

<170> PatentIn Ver. 2.1

<210> 1

<211> 630

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Mammalian ion channel protein

<400> 1

Met Ala Ala Gly Val Ala Ala Trp Leu Pro Phe Ala Arg Ala Ala Ala
1 5 10 15Ile Gly Trp Met Pro Val Ala Ser Gly Pro Met Pro Ala Pro Pro Arg
20 25 30Gln Glu Arg Lys Arg Thr Gln Asp Ala Leu Ile Val Leu Asn Val Ser
35 40 45Gly Thr Arg Phe Gln Thr Trp Gln Asp Thr Leu Glu Arg Tyr Pro Asp
50 55 60Thr Leu Leu Gly Ser Ser Glu Arg Asp Phe Phe Tyr His Pro Glu Thr
65 70 75 80Gln Gln Tyr Phe Phe Asp Arg Asp Pro Asp Ile Phe Arg His Ile Leu
85 90 95Asn Phe Tyr Arg Thr Gly Lys Leu His Tyr Pro Arg His Glu Cys Ile
100 105 110Ser Ala Tyr Asp Glu Glu Leu Ala Phe Phe Gly Leu Ile Pro Glu Ile
115 120 125Ile Gly Asp Cys Cys Tyr Glu Glu Tyr Lys Asp Arg Arg Arg Glu Asn
130 135 140Ala Glu Arg Leu Gln Asp Asp Ala Asp Thr Asp Asn Thr Gly Glu Ser
145 150 155 160

Ala Leu Pro Thr Met Thr Ala Arg Gln Arg Val Trp Arg Ala Phe Glu
 165 170 175
 Asn Pro His Thr Ser Thr Met Ala Leu Val Phe Tyr Tyr Val Thr Gly
 180 185 190
 Phe Phe Ile Ala Val Ser Val Ile Ala Asn Val Val Glu Thr Val Pro
 195 200 205
 Cys Gly Ser Ser Pro Gly His Ile Lys Glu Leu Pro Cys Gly Glu Arg
 210 215 220
 Tyr Ala Val Ala Phe Phe Cys Leu Asp Thr Ala Cys Val Met Ile Phe
 225 230 235 240
 Thr Val Glu Tyr Leu Leu Arg Leu Ala Ala Pro Ser Arg Tyr Arg
 245 250 255
 Phe Val Arg Ser Val Met Ser Ile Ile Asp Val Val Ala Ile Leu Pro
 260 265 270
 Tyr Tyr Ile Gly Leu Val Met Thr Asp Asn Glu Asp Val Ser Gly Ala
 275 280 285
 Phe Val Thr Leu Arg Val Phe Arg Val Phe Arg Ile Phe Lys Phe Ser
 290 295 300
 Arg His Ser Gly Gly Leu Arg Ile Leu Gly Tyr Thr Leu Lys Ser Cys
 305 310 315 320
 Ala Ser Glu Leu Gly Phe Leu Leu Phe Ser Leu Thr Met Ala Ile Ile
 325 330 335
 Ile Phe Ala Thr Val Met Phe Tyr Ala Glu Lys Gly Ser Ser Ala Ser
 340 345 350
 Lys Phe Thr Ser Ile Pro Ala Ala Phe Trp Tyr Thr Ile Val Thr Met
 355 360 365
 Thr Thr Leu Gly Tyr Gly Asp Met Val Pro Lys Thr Ile Ala Gly Lys
 370 375 380
 Ile Phe Gly Ser Ile Cys Ser Leu Ser Gly Val Leu Val Ile Ala Leu
 385 390 395 400
 Pro Val Pro Val Ile Val Ser Asn Phe Ser Arg Ile Tyr His Gln Asn
 405 410 415
 Gln Arg Ala Asp Lys Arg Arg Ala Gln Lys Lys Ala Arg Leu Ala Arg
 420 425 430
 Ile Arg Ala Ala Lys Ser Gly Ser Ala Asn Ala Tyr Met Gln Ser Lys
 435 440 445
 Arg Asn Gly Leu Leu Ser Asn Gln Leu Gln Ser Ser Glu Asp Glu Pro
 450 455 460

Ala Phe Val Ser Lys Ser Ser Gly Ser Ser Phe Glu Thr Gln His His His
 465 470 475 480
 Leu Leu His Cys Leu Glu Lys Thr Thr Asn His Glu Phe Val Asp Glu
 485 490 495
 Gln Val Phe Glu Glu Ser Cys Met Glu Val Ala Thr Val Asn Arg Pro
 500 505 510
 Ser Ser His Ser Pro Ser Leu Ser Ser Gln Gln Gly Val Thr Ser Thr
 515 520 525
 Cys Cys Ser Arg Arg His Lys Lys Thr Phe Arg Ile Pro Asn Ala Asn
 530 535 540
 Val Ser Gly Ser His Arg Gly Ser Val Gln Glu Leu Ser Thr Ile Gln
 545 550 555 560
 Ile Arg Cys Val Glu Arg Thr Pro Leu Ser Asn Ser Arg Ser Ser Leu
 565 570 575
 Asn Ala Lys Met Glu Glu Cys Val Lys Leu Asn Cys Glu Gln Pro Tyr
 580 585 590
 Val Thr Thr Ala Ile Ile Ser Ile Pro Thr Pro Pro Val Thr Thr Pro
 595 600 605
 Glu Gly Asp Asp Arg Pro Glu Ser Pro Glu Tyr Ser Gly Gly Asn Ile
 610 615 620
 Val Arg Val Ser Ala Leu
 625 630

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 <213> Unknown Organism

<220>
 <223> Description of Unknown Organism: Mammalian ion
 channel protein

<400> 2
 Met Ala Ala Gly Val Ala Ala Trp Leu Pro Phe Ala Arg Ala Ala Ala
 1 5 10 15
 Ile Gly Trp Met Pro Val Ala Ser Gly Pro Met Pro Ala Pro Pro Arg
 20 25 30
 Gln Glu Arg Lys Arg Thr Gln Asp Ala Leu Ile Val Leu Asn Val Ser
 35 40 45
 Gly Thr Arg Phe Gln Thr Trp Gln Asp Thr Leu Glu Arg Tyr Pro Asp
 50 55 60
 Thr Leu Leu Gly Ser Ser Glu Arg Asp Phe Phe Tyr His Pro Glu Thr
 65 70 75 80

Gln Gln Tyr Phe Phe Asp Arg Asp Pro Asp Ile Phe Arg His Ile Leu
85 90 95

Asn Phe Tyr Arg Thr Gly Lys Leu His Tyr Pro Arg His Glu Cys Ile
100 105 110

Ser Ala Tyr Asp Glu Glu Leu Ala Phe Phe Gly Leu Ile Pro Glu Ile
115 120 125

Ile Gly Asp Cys Cys Tyr Glu Glu Tyr Lys Asp Arg Arg Arg Glu Asn
130 135 140

Ala Glu Arg Leu Gln Asp Asp Ala Asp Thr Asp Asn Thr Gly Glu Ser
145 150 155 160

Ala Leu Pro Thr Met Thr Ala Arg Gln Arg Val Trp Arg Ala Phe Glu
165 170 175

Asn Pro His Thr Ser Thr Met Ala Leu Val Phe Tyr Tyr Val Thr Gly
180 185 190

Phe Phe Ile Ala Val Ser Val Ile Ala Asn Val Val Glu Thr Gly Ser
195 200 205

Arg His Asp Lys Ile His
210